## DETAILED ACTION

### *Notice to Applicant*

1. The following is an Examiner's Amendment and Reason's for Allowance following Applicant's response dated 9/11/09 and communications with Applicant Representative Atty. Kevin Radigan, Reg. No. 31,789, dated 10/26/09 (*see* attached Interview Summary).

2. Examiner notes that Applicant's amendment of 9/11/09 has been entered and overcomes the rejection under 35 U.S.C. 112, second paragraph. Of claims 1–3, 5–6, 8–10, 12–13, 15–17, and 20 pending as of 9/11/09, claims 1–3, 5–6, 8–10, 12–13, 15–17, and 20 are allowed as amended below.

***Allowable Subject Matter***

3. Claims 1–3, 5–6, 8–10, 12–13, 15–17, and 20 as amended below are allowed over the prior art as explained further below in the reasons for allowance.

## EXAMINER'S AMENDMENT

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin Radigan, Reg. No. 31,789 on 10/26/09.

The application has been amended as follows:

***In the Claims***

Please amend claims 1, 8–10, 12, and 15 of the application as follows:

1. (Currently Amended) A method of assessing a product development management effort comprising:

identifying multiple possible root causes of trouble for a product development management effort, the product development management effort
being undertaken to produce a tangible product;

identifying (1) multiple questions sets for diagnosing the multiple possible root causes of trouble, each question set being a comprehensive set of questions directed to diagnosing a respective root cause of trouble of the multiple possible root causes of trouble; and ~~identifying~~ (2) one or more specific project role~~(s)~~s to provide responses to questions of one of the multiple question sets, the responses from the one or more specific project role~~(s)~~s;

~~facilitating~~ diagnosing, based at least in part on the responses, the respective root cause of trouble and thus assessing the product development management effort to produce the tangible product, wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets;

wherein the diagnosing comprises:

evaluating, using ~~providing~~ a computer-implemented tool, ~~to evaluate answers~~ responses to the question sets, wherein the evaluating comprises:

~~provide guidance based on scored questions regarding existence of one or more root causes of trouble for the product development effort from the identified multiple possible root causes of trouble, the scored questions being produced by~~ automatically counting, using an automated scoring mechanism, ~~the automated scoring mechanism automatically counting~~ the number of responses in required fields of a question set of the multiple question sets; and

scoring, using the automated scoring mechanism, the question set against a total number of required fields in the question set, wherein the scoring depends on a percentage of required fields present in the question set;

thereby ~~to~~ produc[[e]]ing a numeric value which is an indication of the strength of responses for the question set, the strength of responses indication being an indication of the strength of evidence of the respective root cause of trouble ~~and representing the impact of the respective root cause of trouble~~; and

producing ~~wherein the computer-implemented tool further produces~~ a numeric value representing the impact of the respective root cause of trouble on the project development management effort based on at least one of impact to schedule or impact to project cost;

wherein evaluating provides guidance regarding an existence of one or more root causes of trouble for the product development effort from the identified multiple possible root causes of trouble; ~~and~~

plotting, using ~~wherein~~ the computer-implemented tool, ~~plots~~ each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values in a graph with a first axis representing strength of evidence for the respective root causes of trouble and a second axis representing negative impact of the respective root causes on the product development management effort, wherein the graph is a matrix representing a mix of high and/or low negative impact and strength of evidence; and

assessing ~~facilitating~~, based at least in part on the graph, the product development management effort by ~~facilitating~~ identifying a possible root cause of trouble of the multiple possible root causes of trouble in a particular region of the matrix representing ~~with~~ a high negative impact on the product development management effort and a high strength of ~~strong~~ evidence in support of the presence of the root cause of trouble;

wherein diagnosing provides guidance regarding effectiveness of implementation of project management processes employed for the product development management effort.

8. (Currently Amended) A system for assessing management of a product development project comprising:

a processor comprising a computer-implemented tool, the computer-implemented tool:

identifying multiple common root causes of trouble for a product development management effort undertaken to produce a tangible product, and further identifying (1) multiple question sets for diagnosing the multiple common root causes of trouble, each question set being a comprehensive set of questions directed to diagnosing a respective root ~~case~~ cause of trouble of the multiple

possible root causes of trouble; and ~~identifying~~ (2) one or more specific project role~~(s)~~s to provide responses to questions of one of the multiple question ~~set~~ sets, the responses from the one or more specific product role~~(s)~~s;

~~facilitating~~ the computer-implemented too further diagnosing, based at least in part on the responses, the respective root cause of trouble and thus assessing the product development management effort to produce the tangible product, wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets, ~~and wherein~~ the diagnosing comprising:

~~computer-implemented tool evaluates answers~~ evaluating responses to the question sets, the evaluating comprising:

~~and provides guidance based on scored questions regarding existence of one or more root causes of trouble for the product development management effort from the identified multiple common root causes of trouble, the scored questions being produced by~~ automatically counting using an automated scoring mechanism, ~~the automated scoring mechanism automatically counting~~ the number of responses in required fields of a question set of the multiple question sets; [[and]]

scoring, using the automated scoring mechanism, the question set against a total number of required fields in the question set, wherein the scoring depends on a percentage of required fields present in the question set, thereby producing ~~to~~

~~produce~~ a numeric value which is an indication of the strength of responses for the question set, the strength of responses indication being an indication of the strength of evidence of the respective root cause of trouble[[;]] , and

~~wherein the computer-implemented tool further produces~~ producing a numeric value representing the impact of the respective root cause of trouble on the project development management effort~~; and~~ based on at least one of impact to schedule or impact to project cost,

wherein the evaluating provides guidance regarding an existence of one or more root causes of trouble for the product development effort from the identified multiple possible root causes of trouble,

~~wherein the computer-implemented tool plots~~ the diagnosing further comprising plotting each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values in a graph with a first axis representing strength of evidence for the respective root causes of trouble and a second axis representing negative impact of the respective root causes on the product development management effort, wherein the graph is a matrix representing a mix of high and/or low negative impact and strength of evidence, and ~~facilitating~~

the diagnosing further comprising assessing, based at least in part on the graph, the product development management effort by ~~facilitating~~ identifying a possible root cause of trouble of the multiple possible root causes of

trouble ~~with~~ in a particular region of the matrix representing a high negative impact on the product development management effort and ~~strong~~ a high strength of evidence in support of the presence of the root cause of trouble,

wherein diagnosing provides guidance regarding effectiveness of implementation of project management processes employed for the product development management effort.

9. (Currently Amended) The system of claim 8, wherein the computer-implemented tool ~~further comprises means for evaluating~~ evaluates project management processes employed for the product development management effort by comparison thereof to identified, standard project management processes, and ~~wherein the computer-implemented tool~~ provides guidance regarding effectiveness of implementation of the project management processes employed for the product development management effort.

10. (Currently Amended) The system of claim 9, wherein the computer-implemented tool further ~~comprises means for evaluating~~ evaluates project management work product of the product development management effort as further evidence of the existence of one or more root causes of trouble for the product development management effort or the effectiveness of implementation of the project management processes employed for the product development management effort.

12. (Currently Amended) The system of claim 8, wherein the computer-implemented tool ~~further comprises means for identifying~~ identifies the specific project personnel roles to answer questions of the multiple question sets, wherein the multiple question sets also reside within the computer-implemented tool.

15. (Currently Amended) At least one program storage device readable by a computer embodying at least one program of instructions executable by the computer to

perform, when executing on the computer, a method of assessing a product development management effort, the method comprising:

identifying multiple possible root causes of trouble for a product development management effort, the product development management effort being undertaken to product a tangible product;

identifying (1) multiple question sets for diagnosing the multiple possible root causes of trouble, each question set being a set of comprehensive questions directed to diagnosing a respective root cause of trouble of the multiple possible root causes of trouble; and ~~identifying~~ (2) one or more specific project ~~role(s)~~ roles to provide responses to questions of one of the multiple question ~~set~~ sets, the responses from the one or more specific project ~~role(s) facilitating~~ roles;

diagnosing, based at least in part on the responses, the respective root cause of trouble and thus assessing the product development management effort to produce the tangible product, wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets[[;]], wherein the diagnosing comprises:

evaluating ~~answers~~ responses to the question sets, wherein the evaluating comprises:

~~and providing guidance based on scored questions regarding existence of one or more root causes of trouble for the product development effort from the identified multiple possible root causes of trouble, the scored questions being produced by~~ automatically counting using an automated scoring mechanism, ~~the automated scoring mechanism automatically counting~~ the number of responses in required fields of a question set of the multiple question sets; [[and]]

scoring, using the automated scoring mechanism, the question set against a total number of required fields in the question set, wherein the scoring depends on a percentage of required fields present in the question set, thereby producing ~~to produce~~ a numeric value which is an indication of the strength of responses for the question set, the strength of responses indication being an indication of the strength of evidence of the respective root cause of trouble; and

~~wherein the computer-implemented tool further produces~~ producing a numeric value representing the impact of the respective root cause of trouble on the project development management effort based on at least one of impact to schedule or impact to project cost; [[and]]

wherein evaluating provides guidance regarding an existence of one or more root causes of trouble for the product development effort from the identified multiple root cause of trouble;

~~wherein the computer-implemented tool plots~~ plotting each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values in a graph with a first axis representing strength of evidence for the respective root causes of trouble and a second axis representing negative impact of the respective root causes on the product development management effort, wherein the graph is a matrix representing a mix of high and/or low negative impact and strength of evidence; and

~~facilitating accessing~~ assessing, based at least in part on the graph, the product development management effort by ~~facilitating~~ identifying a possible root cause of trouble of the multiple possible

root causes of trouble ~~with~~ in a particular region of the matrix representing a high negative impact on the product development management effort and ~~strong~~ a high strength of evidence in support of the presence of the root cause of trouble;

wherein diagnosing provides guidance regarding effectiveness of implementation of project management processes employed for the product development management effort.

***Reasons for Allowance***

5. The following is an examiner's statement of reasons for allowance:

In the art of computer-implemented root cause analysis, the present invention is directed to a method, system, and computer program that assesses a product development management effort by identifying multiple possible root causes of trouble so as to provide guidance regarding effectiveness of implementation of processes by identifying (1) multiple questions sets directed to diagnosing a root cause of trouble, and (2) roles to provides responses to the question sets; diagnosing, based at least in part on the responses, the root cause of trouble by evaluating responses to the question sets by automatically counting the number of responses in required fields of a question set of the multiple question sets; and numerically scoring the question set against a total number of required fields in the question set, wherein the scoring depends on a percentage of required fields present in the question set; thereby indicating a the strength of responses for the question set, indicating a strength of evidence of the root cause of trouble; and producing a numeric value representing the impact of the root cause of trouble based on at least one of impact to schedule or impact to project cost; plotting each root cause of trouble using the numeric values in a graph with a first axis representing strength of evidence for the root causes of trouble and a second axis representing negative impact of the root causes, wherein the graph is a matrix representing a mix of high and/or low negative impact and strength of evidence; and assessing, based at least in part on the

graph, the product development management effort by identifying a possible root cause of trouble of the multiple possible root causes of trouble in a particular region of the matrix representing ~~with~~ a high negative impact on the product development management effort and a high strength of evidence in support of the presence of the root cause of trouble.

The closest prior art, **Whitacre et al., U.S. Pub. 2004/0138944** [hereinafter Whitacre], teaches a performance management system and method that performs the following: identifying multiple possible root causes of trouble for an effort; identifying multiple questions sets for the multiple possible root causes of trouble, each question set being a comprehensive set of questions directed to diagnosing a respective root cause of trouble of the multiple possible root causes of trouble, and thus assessing the effort and identifying specific project role(s) to provide responses to questions of the question set, the responses from the specific project role(s) facilitating diagnosing the respective root cause of trouble; evaluating answers to the question sets and provide guidance based on the scored questions regarding existence of one or more root causes of trouble for the effort from the identified multiple possible root causes of trouble; computer implemented functionality, especially as applied in its computer-implemented employee scorecard and dashboard tools; and an automated scoring mechanism that generates a scorecard that scores and employee based on their performance.

**Miller, U.S. Pub. 2002/0165752**, teaches an employment/applicant matching system in the analogous art of employer-based testing, including scored questions produced by an automated scoring mechanism, the automated scoring mechanism automatically counting the number of responses in all fields of a question set of the

multiple question sets and scoring the question set against a total number of all fields in the question set to produce a numeric value which is an indication of the strength of overall performance for the question set. Miller also generally teaches the inclusion of mandatory, or required, questions has the capability of scoring by category; and is capable of monitoring quantities and qualities of answers (and non answers) to questions and question categories upon submission of a test.

**Nelson, U.S. Pat. 7,451,063** teaches a method for prioritizing risks associated with the design and manufacture of products wherein the assessment is done with respect to a product development effort to produce the tangible product; wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets; representing the impact of the respective root cause of trouble on the project development effort; and a computer-implemented tool plots a first variable in a graph with a first axis representing a first variable and a second axis representing a second variable.

**Haimes et al., *Risk Filtering, Ranking, and management Framework Using Hierarchical Holographic Mapping*, Risk Analysis, Vol. 22, No. 2, 2002, pg. 383–97** [hereinafter Haimes], teaches a framework for identifying, prioritizing, assessing and managing risk scenarios including a qualitative severity scale matrix comprising likelihood of an incident occuring on one axis and effect on a second axis, representing a mix from low to high of the two variables.

**Engert and Lansdowne, Risk Matrix User's Guide, Version 2.2, November 1999, pg. 1–44** [hereinafter Engert], teaches a risk matrix software tool comprising a risk

assessment process including a risk rating scale which examines probability of occurrence versus impact with respect to risk, ranging from low to high.

However, neither Whitacre, Miller, Nelson, Haimes, nor Engert, singularly or in combination, teach or fairly suggest a root cause analysis tool comprising scoring, using the automated scoring mechanism, the question set against a total number of required fields in the question set, *wherein the scoring depends on a percentage of required fields present in the question set* . . . producing a numeric value which is an indication of the . . . strength of evidence of the respective root cause of trouble; producing a numeric value representing the impact of the respective root cause of trouble . . . *based on at least one of impact to schedule or impact to project cost;* and plotting each root cause of trouble . . . *using the produced numeric values in a graph with a first axis representing strength of evidence for the respective root causes of trouble and a second axis representing negative impact of the respective root causes* . . . wherein the graph is a matrix; and identifying a possible root cause of trouble . . . *in a particular region of the matrix representing a high negative impact . . . and a high strength of evidence.*

Nor does the remaining prior art of record remedy the deficiencies found in Whitacre, Miller, Nelson, Haimes, and Engert. Furthermore, neither the prior art, the nature of the problem, nor knowledge of a person having ordinary skill in the art provides for any predictable or reasonable rationale to combine prior art teachings.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN M. PATS whose telephone number is (571)270-1363. The examiner can normally be reached on Monday through Friday, 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on 571-272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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